March 4, 2009

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PUBLIC UTILITIES
COMMISSION

Darcy L. Endo-Omoto
Vice President
Government & Community Affairs

The Honorable Chairman and Members of the
Hawaii Public Utilities Commission
465 South King Street
Kekuanaoa Building, 1st Floor
Honolulu, Hawaii 96813

Subject: Docket No. 2008-0273
Feed-In Tariffs Investigation
Information Requests

Pursuant to the Order Approving the HECO Companies' Proposed Procedural Order, as Modified, filed on January 20, 2009, attached are Hawaiian Electric Company, Inc. ("HECO"), Hawaii Electric Light Company, Inc. ("HELCO"), Maui Electric Company, Limited ("MECO") (collectively, the "HECO Companies") information requests ("IRs") regarding the following Parties' Statement of Position and proposal, all filed on February 25, 2009, in the subject proceeding:

- Blue Planet Foundation
- City and County of Honolulu
- Clean Energy Maui
- Alexander & Baldwin, Inc. through its division, Hawaiian Commercial & Sugar Company
- Hawaii Renewable Energy Alliance
- Hawaii Solar Energy Association
- Life of the Land
- The Solar Alliance
- Sopogy Inc.
- Zero Emissions Leasing LLC

Sincerely,

Attachments

cc: Service List

SERVICE LIST
(Docket No. 2008-0273)

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SERVICE LIST
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SERVICE LIST
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Through its division, HAWAIIAN COMMERCIAL & SUGAR COMPANY

Blue Planet Foundation

HECO Companies'
Information Requests ("IRs") to Blue Planet Foundation ("Blue Planet")

HECO/Blue Planet-IR-1
Do you agree that in addition to achieving a greater level of renewable energy for the State, reliability, power quality and ratepayer impacts are important considerations that must be addressed as a part of any feed-in tariff (FIT) design? If not, please discuss why not.

HECO/Blue Planet-IR-2
Do you agree that the HECO, MECO and HELCO systems have different technical and reliability considerations? If not, please discuss why not.

HECO/Blue Planet-IR-3
Do you agree that due to the existing and/or anticipated levels of intermittent renewable resources on each island system, that there may be technical and/or operational constraints upon the amount of additional intermittent renewable energy that each island system can absorb? If not, please discuss why not.

HECO/Blue Planet-IR-4
How does your FIT proposal insure that reliability and power quality on each island electric system are maintained?

HECO/Blue Planet-IR-5
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures reliability on each island system? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/Blue Planet-IR-6
As variable generation is presently having an adverse impact on a system's reliability, how would your FIT proposal mitigate any further adverse impacts?

HECO/Blue Planet-IR-7
Do you agree that your FIT proposal could result in increases in the rates paid by utility ratepayers? If so, what do you view as an acceptable level of increase for each of the utility system's ratepayers? What do you base that opinion on? Please provide any evaluations or analyses or studies used to support this opinion.

HECO/Blue Planet-IR-8
How does your FIT proposal insure that ratepayers within each of the three utility service territories do not receive significant rate increases?

HECO/Blue Planet-IR-9
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures that ratepayers within each of the three utility service territories

do not receive significant rate increases? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/Blue Planet-IR-10
Do you agree that competitive bidding can provide benefits to ratepayers? If so, how does your proposal insure that ratepayers receive the benefits that competitive bidding can provide?

HECO/Blue Planet-IR-11
Please explain why a feed in tariff should be applied to larger resources, rather than competitively bid to assure ratepayers the lowest prices for significant blocks of renewable energy?

HECO/Blue Planet-IR-12
Do you agree that if a Renewable Energy Generating Facility is unable to meet the technical requirements set forth in the utilities' rules relating to interconnection with the utility's electric system, that Renewable Energy Generating Facility should not be interconnected with the utility's electric system? If not, please discuss why not.

HECO/Blue Planet-IR-13
Do you agree that, as an electric system must remain in balance, if there is a greater amount of energy being generated in relation to load being served that generation must be reduced or curtailed to achieve system balance (assuming that load cannot be increased)? If not, please describe how the system balance can otherwise be achieved.

HECO/Blue Planet-IR-14
Please explain how your proposal to require the utility to take all renewable energy generated by a FIT resource regardless of system need assures system balance and stability?

HECO/Blue Planet-IR-15
Is it your position that FIT resources may not be curtailed under any circumstance? If there are circumstances under which a FIT resource may be curtailed, please explain in detail how that curtailment would be accomplished. Please explain in detail how existing renewable projects fit into any curtailment order and the basis for assigning a lower curtailment priority to existing renewable resources.

HECO/Blue Planet-IR-16
Please provide any evaluations, studies or analyses to support the following in your FIT proposal: (1) the inclusion of each renewable resource type; (2) the viability of each renewable resource type for each island system; (3) the project size demarcations for each renewable resource type; (4) the viability of each project size for each island system; and (5) the basis for a different or separate rate for each size demarcation (if applicable). This should include any

information or evidence that you may have on the general or specific plans of any renewable resource developer to develop renewable resources of this type, and including the anticipated size of the project, on any island system within the next one, three and five years.

HECO/Blue Planet-IR-17
Please describe the methodology and rationale used to determine the proposed twenty (20) year terms in your FIT proposal for each technology. Please provide any evaluations, studies or analyses to support the proposed 20 years terms for each technology listed.

HECO/Blue Planet-IR-18
Please provide the bases for the proposed penetration limits for intermittent renewable energy sources. Please provide any evaluations, studies or analyses to support the proposed penetration limits, including in particular any evaluations, studies or analyses regarding maintenance of system reliability at the proposed penetration limits.

HECO/Blue Planet-IR-19
Please explain in detail how the proposed queuing procedures based upon those procedures proposed by the Midwest ISO would operate and be implemented for each island electric system. In particular, please provide any evaluations, studies or analyses of potential differences between the Midwest ISO service territory and the Hawaii utility electric systems and how those differences would be accommodated and addressed through your FIT proposal. Please discuss in detail whether the quality of power (steadiness, predictability, ability to enhance regulating resources on the grid and other such characteristic that are important to power reliability) should be a factor in setting the priority a project receives, and if not, why not.

HECO/Blue Planet-IR-20
Should a utility be entitled to use the generated output of a renewable resource in its service territory toward meeting a state or county mandated RPS standard regardless of ownership of the environmental credits? If not, please discuss why not?

HECO/Blue Planet-IR-21 Ref: Statement of Position, Page 3
Please provide any evaluations, studies or analyses to support your statement that the "Straw Tariff appears unlikely to fully realize" certain economic and environmental benefits associated with FITs.

HECO/Blue Planet-IR-22 Ref: Statement of Position, Page 5
Please explain in detail any efforts that you are undertaking to better understand and evaluate the potential adverse consequences of an FIT similar to your FIT proposal that you presently determine to be "unknown or unclear."

HECO/Blue Planet-IR-23 Ref: Statement of Position, Page 5

Please provide any evaluations, studies or analyses to support your statement that "the potential adverse consequences of the Straw FIT including delaying and increasing the cost of achieving the Energy Agreement's primary policy objective."

HECO/Blue Planet-IR-24 Ref: Statement of Position, Page 5
Please provide any evaluations, studies or analyses to support your statement that a "FIT similar to the Proposed FIT is superior to the Competitive Bidding Framework to meet Hawaii's clean energy and energy independence goals due to its ability to more rapidly achieve the benefits set forth in the KEMA report...."

HECO/Blue Planet-IR-25 Ref: Statement of Position, Page 6
Please provide any basis that you may have to support your proposal to have your FIT proposal supplant the Competitive Bidding Framework for renewable electricity generation that is larger than 5 MW on the island of Oahu and larger than 2.7 MW on the islands of Maui and Hawaii.

HECO/Blue Planet-IR-26 Ref: Statement of Position, Page 7
Please provide any evaluations, studies or analyses to support your statement that your FIT proposal is the best design for a FIT and is more likely to fully achieve the FIT benefits set forth in the KEMA report.

HECO/Blue Planet-IR-27 Ref: Statement of Position, Page 7
Please provide any evaluations, studies or analyses regarding the potential costs to consumers and appropriateness of caps under your FIT proposal.

HECO/Blue Planet-IR-28 Ref: Statement of Position, Page 7
Do you agree that appropriate "general annual caps, production caps, size caps and expenditure caps" may be of assistance in meeting or achieving policy objectives contained in the Energy Agreement? If not, please discuss why not.

City and County of Honolulu

HECO Companies's
Information Requests ("IRs") to the City and County of Honolulu ("City")

HECO/City-IR-1 Ref: Paragraph 3
Please describe in detail the City's near term plans to expand its generating capacity including type of technology, size of project, location of project and expected installation date to the extent that information is available.

HECO/City-IR-2 Ref: Paragraph 5
Please provide any evaluations, studies or analyses to support your statement that "there are potential biomass and biogas projects close to being ready for development" including detailed descriptions of those projects, where they are to be located, their anticipated size, and anticipated in-service dates.

HECO/City-IR-3 Ref: Paragraph 8
Please provide any evaluations, studies or analyses to support your statement that "there should be no caps, at least for the initial five to ten years of development experience under this tariff" and that "if caps are considered, they should be significantly higher than the caps contemplated by the Joint Proposal."

a. How does your proposal to exclude any caps insure that reliability and power quality on each island electric system are maintained?
b. What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your proposal insures reliability on each island system? Please provide that data, evaluations, studies and/or analyses to the extent they are available.
c. If variable generation is presently having an adverse impact on a system's reliability, how would your proposal mitigate any further adverse impacts?
d. Do you agree that your proposal could result in increases in the rates paid by utility ratepayers? If so, what do you view as an acceptable level of increase for each of the utility system's ratepayers? What do you base that opinion on? Please provide any evaluations or analyses or studies used to support this opinion.
e. How does your proposal insure that ratepayers within each of the three utility service territories do not receive significant rate increases?
f. What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures that ratepayers within each of the three utility service territories do not receive significant rate increases? Please provide that data, evaluations, studies and/or analyses to the extent they are available.
g. What do you mean by "significantly higher"? What do you base any significantly higher number upon?

HECO/City-IR-4 Ref: Paragraph 11
Please provide any evaluations, studies or analyses to support your statement that contracts shorter than 20 years in length "require higher tariffs and thus pose greater difficulties in arriving at realistic prices." Does this statement apply to any technology? How do you define "realistic prices"?

Clean Energy Maui LLC

HECO Companies'
Information Requests ("IRs") to Clean Energy Maui ("CEM")

HECO/CEM-IR-1
Do you agree that in addition to achieving a greater level of renewable energy for the State, reliability, power quality and ratepayer impacts are important considerations that must be addressed as a part of any feed-in tariff (FIT) design? If not, please discuss why not.

HECO/CEM-IR-2
Do you agree that the HECO, MECO and HELCO systems have different technical and reliability considerations? If not, please discuss why not.

HECO/CEM -IR-3
Do you agree that due to the existing and/or anticipated levels of intermittent renewable resources on each island system, that there may be technical and/or operational constraints upon the amount of additional intermittent renewable energy that each island system can absorb? If not, please discuss why not.

HECO/CEM-IR-4
How does your FIT proposal insure that reliability and power quality on each island electric system are maintained?

HECO/CEM-IR-5
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures reliability on each island system? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/CEM-IR-6
As variable generation is presently having an adverse impact on a system's reliability, how would your FIT proposal mitigate any further adverse impacts?

HECO/CEM-IR-7
Do you agree that your FIT proposal could result in increases in the rates paid by utility ratepayers? If so, what do you view as an acceptable level of increase for each of the utility system's ratepayers? What do you base that opinion on? Please provide any evaluations or analyses or studies used to support this opinion.

HECO/CEM-IR-8
How does your FIT proposal insure that ratepayers within each of the three utility service territories do not receive significant rate increases?

HECO/CEM-IR-9
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures that ratepayers within each of the three utility service territories

do not receive significant rate increases? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/CEM-IR-10
Do you agree that competitive bidding can provide benefits to ratepayers? If so, how does your proposal insure that ratepayers receive the benefits that competitive bidding can provide?

HECO/CEM-IR-11
Please explain why a feed in tariff should be applied to larger resources, rather than competitively bid to assure ratepayers the lowest prices for significant blocks of renewable energy?

HECO/CEM-IR-12
Do you agree that if a Renewable Energy Generating Facility is unable to meet the technical requirements set forth in the utilities' rules relating to interconnection with the utility's electric system, that Renewable Energy Generating Facility should not be interconnected with the utility's electric system? If not, please discuss why not.

HECO/CEM-IR-13
Do you agree that, as an electric system must remain in balance, if there is a greater amount of energy being generated in relation to load being served that generation must be reduced or curtailed to achieve system balance (assuming that load cannot be increased)? If not, please describe how the system balance can otherwise be achieved.

HECO/CEM-IR-14
Please explain how your proposal to require the utility to take all renewable energy generated by a FIT resource regardless of system need assures system balance and stability?

HECO/CEM-IR-15
Is it your position that FIT resources may not be curtailed under any circumstance? If there are circumstances under which a FIT resource may be curtailed, please explain in detail how that curtailment would be accomplished. Please explain in detail how existing renewable projects fit into any curtailment order and the basis for assigning a lower curtailment priority to existing renewable resources.

HECO/CEM-IR-16
Please provide any evaluations, studies or analyses to support the following in your FIT proposal: (1) the inclusion of each renewable resource type; (2) the viability of each renewable resource type for each island system; (3) the project size demarcations for each renewable resource type; (4) the viability of each project size for each island system; and (5) the basis for a different or separate rate for each size demarcation (if applicable). This should include any

information or evidence that you may have on the general or specific plans of any renewable resource developer to develop renewable resources of this type, and including the anticipated size of the project, on any island system within the next one, three and five years.

HECO/CEM-IR-17
Please describe the methodology and rationale used to determine the proposed twenty (20) year terms in your FIT proposal for each technology. Please provide any evaluations, studies or analyses to support the proposed 20 years terms for each technology listed.

HECO/CEM-IR-18
Please provide the bases for the proposed penetration limits for intermittent renewable energy sources. Please provide any evaluations, studies or analyses to support the proposed penetration limits, including in particular any evaluations, studies or analyses regarding maintenance of system reliability at the proposed penetration limits.

HECO/CEM-IR-19
Please explain in detail how the proposed queuing procedures based upon those procedures proposed by the Midwest ISO would operate and be implemented for each island electric system. In particular, please provide any evaluations, studies or analyses of potential differences between the Midwest ISO service territory and the Hawaii utility electric systems and how those differences would be accommodated and addressed through your FIT proposal. Please discuss in detail whether the quality of power (steadiness, predictability, ability to enhance regulating resources on the grid and other such characteristic that are important to power reliability) should be a factor in setting the priority a project receives, and if not, why not.

HECO/CEM-IR-20
Should a utility be entitled to use the generated output of a renewable resource in its service territory toward meeting a state or county mandated RPS standard regardless of ownership of the environmental credits? If not, please discuss why not?

HECO/CEM-IR-21
Please provide any evaluations, studies, analyses or data to support the rates contained in your FIT proposal including detailed support for the applicability of those rates to the specified resources on the Hawaii utilities' island systems.

HECO/CEM-IR-22
Please explain how your proposed rates are affected by the key costs and operating characteristics referenced in the Commission's NRRI Scoping Paper filed December 11, 2008.

HECO/CEM-IR-23 Ref: Issue 1
Please provide any evaluations, studies, analyses or data to support your assertion that a "German-style feed-in tariff is Hawaii's best and only chance to achieve and exceed RPS goals."

HECO Companies'
Information Requests ("IRs") to Clean Energy Maui ("CEM")

HECO/CEM-IR-24 Ref: Issue 1
Please provide any evaluations, studies, analyses or data to support your assertion that "[i]n order to work a FIT needs to be free of caps...."

HECO/CEM-IR-25 Ref: Issue 1
Issue 1 – Please provide any evaluations, studies, analyses or data to support your assertion that "[w]ith a correctly designed FIT, Hawaii will see billions of dollars of renewable investments."

HECO/CEM-IR-26 Ref: Issue 2
Please explain in detail your statement that "Hawaii will see the rise of a renewable energy sector many times the size of the current electric utilities" and provide any evaluations, studies, analyses or data to describe the potential impacts on grid reliability that would result from such a level of renewable resources on the island electrical systems and how you would mitigate those impacts.

HECO/CEM-IR-27 Ref: Issue 7
Please provide any evaluations, studies, analyses or data which compare the feed-in tariff design adopted in Germany with the FIT proposals in this docket; specifically, please describe any constitutional, legal, regulatory or political requirements or directives relating to renewable energy which differ between the two jurisdictions.

HECO/CEM-IR-28 Ref: Issue 8
Please describe in detail your efforts to contact international experts to define a FIT rate for grid-stabilizing measures, such as storage, and please provide the results of your efforts.

HECO/CEM-IR-29 Ref: Issue 11
Please quantify the "relatively enormous additions to generating capacity from a particular RE technology that could result if the rate for that particular technology was set too high.

Alexander & Baldwin, Inc.
through its division, Hawaiian
Commercial & Sugar Company

HECO Companies'
Information Requests ("IRs") to Alexander and Baldwin, Inc. through its division Hawaiian Commercial & Sugar Company ("HC&S")

HECO/HC&S-IR-1
Do you agree that in addition to achieving a greater level of renewable energy for the State, reliability, power quality and ratepayer impacts are important considerations that must be addressed as a part of any feed-in tariff (FIT) design? If not, please discuss why not.

HECO/HC&S-IR-2
Do you agree that the HECO, MECO and HELCO systems have different technical and reliability considerations? If not, please discuss why not.

HECO/HC&S-IR-3
Do you agree that due to the existing and/or anticipated levels of intermittent renewable resources on each island system, that there may be technical and/or operational constraints upon the amount of additional intermittent renewable energy that each island system can absorb? If not, please discuss why not.

HECO/HC&S-IR-4
How does your FIT proposal insure that reliability and power quality on each island electric system are maintained?

HECO/HC&S-IR-5
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures reliability on each island system? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/HC&S-IR-6
As variable generation is presently having an adverse impact on a system's reliability, how would your FIT proposal mitigate any further adverse impacts?

HECO/HC&S-IR-7
Do you agree that your FIT proposal could result in increases in the rates paid by utility ratepayers? If so, what do you view as an acceptable level of increase for each of the utility system's ratepayers? What do you base that opinion on? Please provide any evaluations or analyses or studies used to support this opinion.

HECO/HC&S-IR-8
How does your FIT proposal insure that ratepayers within each of the three utility service territories do not receive significant rate increases?

HECO/HC&S-IR-9
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures that ratepayers within each of the three utility service territories

do not receive significant rate increases? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/HC&S-IR-10
Do you agree that competitive bidding can provide benefits to ratepayers? If so, how does your proposal insure that ratepayers receive the benefits that competitive bidding can provide?

HECO/HC&S-IR-11
Please explain why a feed in tariff should be applied to larger resources, rather than competitively bid to assure ratepayers the lowest prices for significant blocks of renewable energy?

HECO/HC&S-IR-12
Do you agree that if a Renewable Energy Generating Facility is unable to meet the technical requirements set forth in the utilities' rules relating to interconnection with the utility's electric system, that Renewable Energy Generating Facility should not be interconnected with the utility's electric system? If not, please discuss why not.

HECO/HC&S-IR-13
Do you agree that, as an electric system must remain in balance, if there is a greater amount of energy being generated in relation to load being served that generation must be reduced or curtailed to achieve system balance (assuming that load cannot be increased)? If not, please describe how the system balance can otherwise be achieved.

HECO/HC&S-IR-14
Please explain how your proposal to require the utility to take all renewable energy generated by a FIT resource regardless of system need assures system balance and stability?

HECO/HC&S-IR-15
Is it your position that FIT resources may not be curtailed under any circumstance? If there are circumstances under which a FIT resource may be curtailed, please explain in detail how that curtailment would be accomplished. Please explain in detail how existing renewable projects fit into any curtailment order and the basis for assigning a lower curtailment priority to existing renewable resources.

HECO/HC&S-IR-16
Please provide any evaluations, studies or analyses to support the following in your FIT proposal: (1) the inclusion of each renewable resource type; (2) the viability of each renewable resource type for each island system; (3) the project size demarcations for each renewable resource type; (4) the viability of each project size for each island system; and (5) the basis for a different or separate rate for each size demarcation (if applicable). This should include any

information or evidence that you may have on the general or specific plans of any renewable resource developer to develop renewable resources of this type, and including the anticipated size of the project, on any island system within the next one, three and five years.

HECO/HC&S-IR-17
Please describe the methodology and rationale used to determine the proposed twenty (20) year terms in your FIT proposal for each technology. Please provide any evaluations, studies or analyses to support the proposed 20 years terms for each technology listed.

HECO/HC&S-IR-18
Please provide the bases for the proposed penetration limits for intermittent renewable energy sources. Please provide any evaluations, studies or analyses to support the proposed penetration limits, including in particular any evaluations, studies or analyses regarding maintenance of system reliability at the proposed penetration limits.

HECO/HC&S-IR-19
Please explain in detail how the proposed queuing procedures based upon those procedures proposed by the Midwest ISO would operate and be implemented for each island electric system. In particular, please provide any evaluations, studies or analyses of potential differences between the Midwest ISO service territory and the Hawaii utility electric systems and how those differences would be accommodated and addressed through your FIT proposal. Please discuss in detail whether the quality of power (steadiness, predictability, ability to enhance regulating resources on the grid and other such characteristic that are important to power reliability) should be a factor in setting the priority a project receives, and if not, why not.

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Should a utility be entitled to use the generated output of a renewable resource in its service territory toward meeting a state or county mandated RPS standard regardless of ownership of the environmental credits? If not, please discuss why not?

HECO/HC&S-IR-21
Please provide any evaluations, studies, analyses or data to support the rates contained in your FIT proposal including detailed support for the applicability of those rates to the specified resources on the Hawaii utilities' island systems.

HECO/HC&S-IR-22
Please explain how your proposed rates are affected by the key costs and operating characteristics referenced in the Commission's NRRI Scoping Paper filed December 11, 2008.

HECO Companies'
Information Requests ("IRs") to Alexander and Baldwin, Inc. through its division Hawaiian Commercial & Sugar Company ("HC&S")

HECO/HC&S-IR-23
Please describe in detail how your proposal to amend the definitions of "Biomass" and "Hybrid Facility" in your FIT proposal to include fuel from other sources including coal is consistent with the applicability of an FIT Tariff to renewable (non-fossil) resources.

Hawaii Renewable Energy Alliance

HECO Companies'
Information Requests ("IRs") to Hawaii Renewable Energy Allliance ("HREA")

HECO/HREA-IR-1
Do you agree that in addition to achieving a greater level of renewable energy for the State, reliability, power quality and ratepayer impacts are important considerations that must be addressed as a part of any feed-in tariff (FIT) design? If not, please discuss why not.

HECO/HREA-IR-2
Do you agree that the HECO, MECO and HELCO systems have different technical and reliability considerations? If not, please discuss why not.

HECO/HREA-IR-3
Do you agree that due to the existing and/or anticipated levels of intermittent renewable resources on each island system, that there may be technical and/or operational constraints upon the amount of additional intermittent renewable energy that each island system can absorb? If not, please discuss why not.

HECO/HREA-IR-4
How does your FIT proposal insure that reliability and power quality on each island electric system are maintained?

HECO/HREA-IR-5
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures reliability on each island system? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/HREA-IR-6
As variable generation is presently having an adverse impact on a system's reliability, how would your FIT proposal mitigate any further adverse impacts?

HECO/HREA-IR-7
Do you agree that your FIT proposal could result in increases in the rates paid by utility ratepayers? If so, what do you view as an acceptable level of increase for each of the utility system's ratepayers? What do you base that opinion on? Please provide any evaluations or analyses or studies used to support this opinion.

HECO/HREA-IR-8
How does your FIT proposal insure that ratepayers within each of the three utility service territories do not receive significant rate increases?

HECO/HREA-IR-9
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures that ratepayers within each of the three utility service territories

do not receive significant rate increases? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/HREA-IR-10
Do you agree that competitive bidding can provide benefits to ratepayers? If so, how does your proposal insure that ratepayers receive the benefits that competitive bidding can provide?

HECO/HREA-IR-11
Please explain why a feed in tariff should be applied to larger resources, rather than competitively bid to assure ratepayers the lowest prices for significant blocks of renewable energy?

HECO/HREA-IR-12
Do you agree that if a Renewable Energy Generating Facility is unable to meet the technical requirements set forth in the utilities' rules relating to interconnection with the utility's electric system, that Renewable Energy Generating Facility should not be interconnected with the utility's electric system? If not, please discuss why not.

HECO/HREA-IR-13
Do you agree that, as an electric system must remain in balance, if there is a greater amount of energy being generated in relation to load being served that generation must be reduced or curtailed to achieve system balance (assuming that load cannot be increased)? If not, please describe how the system balance can otherwise be achieved.

HECO/HREA-IR-14
Please explain how your proposal to require the utility to take all renewable energy generated by a FIT resource regardless of system need assures system balance and stability?

HECO/HREA-IR-15
Is it your position that FIT resources may not be curtailed under any circumstance? If there are circumstances under which a FIT resource may be curtailed, please explain in detail how that curtailment would be accomplished. Please explain in detail how existing renewable projects fit into any curtailment order and the basis for assigning a lower curtailment priority to existing renewable resources.

HECO/HREA-IR-16
Please provide any evaluations, studies or analyses to support the following in your FIT proposal: (1) the inclusion of each renewable resource type; (2) the viability of each renewable resource type for each island system; (3) the project size demarcations for each renewable resource type; (4) the viability of each project size for each island system; and (5) the basis for a different or separate rate for each size demarcation (if applicable). This should include any

information or evidence that you may have on the general or specific plans of any renewable resource developer to develop renewable resources of this type, and including the anticipated size of the project, on any island system within the next one, three and five years.

HECO/HREA-IR-17
Please describe the methodology and rationale used to determine the proposed twenty (20) year terms in your FIT proposal for each technology. Please provide any evaluations, studies or analyses to support the proposed 20 years terms for each technology listed.

HECO/HREA-IR-18
Please provide the bases for the proposed penetration limits for intermittent renewable energy sources. Please provide any evaluations, studies or analyses to support the proposed penetration limits, including in particular any evaluations, studies or analyses regarding maintenance of system reliability at the proposed penetration limits.

HECO/HREA-IR-19
Please explain in detail how the proposed queuing procedures based upon those procedures proposed by the Midwest ISO would operate and be implemented for each island electric system. In particular, please provide any evaluations, studies or analyses of potential differences between the Midwest ISO service territory and the Hawaii utility electric systems and how those differences would be accommodated and addressed through your FIT proposal. Please discuss in detail whether the quality of power (steadiness, predictability, ability to enhance regulating resources on the grid and other such characteristic that are important to power reliability) should be a factor in setting the priority a project receives, and if not, why not.

HECO/HREA-IR-20
Should a utility be entitled to use the generated output of a renewable resource in its service territory toward meeting a state or county mandated RPS standard regardless of ownership of the environmental credits? If not, please discuss why not?

HECO/HREA-IR-21 Re: Issue 5
Please describe in detail the technologies for which you believe sufficient data and cost information exists and for which technologies the same level of information may not be available.

HECO/HREA-IR-22 Ref: Issue 6
Please provide any evaluations, studies or analyses to support your proposal that the Commission establish FITs for resources up to 20 MW in size.

HECO/HREA-IR-23 Ref: Issue 10
Please describe in detail your efforts to "collect more data and information" and "assumptions about the growth of the market."

Hawaii Solar Energy Association

HECO Companies'
Information Requests ("IRs") to Hawaii Solar Energy Association ("HSEA")

HECO/HSEA-IR-1
Do you agree that in addition to achieving a greater level of renewable energy for the State, reliability, power quality and ratepayer impacts are important considerations that must be addressed as a part of any feed-in tariff (FIT) design? If not, please discuss why not.

HECO/HSEA-IR-2
Do you agree that the HECO, MECO and HELCO systems have different technical and reliability considerations? If not, please discuss why not.

HECO/HSEA-IR-3
Do you agree that due to the existing and/or anticipated levels of intermittent renewable resources on each island system, that there may be technical and/or operational constraints upon the amount of additional intermittent renewable energy that each island system can absorb? If not, please discuss why not.

HECO/HSEA-IR-4
How does your FIT proposal insure that reliability and power quality on each island electric system are maintained?

HECO/HSEA-IR-5
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures reliability on each island system? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/HSEA-IR-6
As variable generation is presently having an adverse impact on a system's reliability, how would your FIT proposal mitigate any further adverse impacts?

HECO/HSEA-IR-7
Do you agree that your FIT proposal could result in increases in the rates paid by utility ratepayers? If so, what do you view as an acceptable level of increase for each of the utility system's ratepayers? What do you base that opinion on? Please provide any evaluations or analyses or studies used to support this opinion.

HECO/HSEA-IR-8
How does your FIT proposal insure that ratepayers within each of the three utility service territories do not receive significant rate increases?

HECO/HSEA-IR-9
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures that ratepayers within each of the three utility service territories

do not receive significant rate increases? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/HSEA-IR-10
Do you agree that competitive bidding can provide benefits to ratepayers? If so, how does your proposal insure that ratepayers receive the benefits that competitive bidding can provide?

HECO/HSEA-IR-11
Please explain why a feed in tariff should be applied to larger resources, rather than competitively bid to assure ratepayers the lowest prices for significant blocks of renewable energy?

HECO/HSEA-IR-12
Do you agree that if a Renewable Energy Generating Facility is unable to meet the technical requirements set forth in the utilities' rules relating to interconnection with the utility's electric system, that Renewable Energy Generating Facility should not be interconnected with the utility's electric system? If not, please discuss why not.

HECO/HSEA-IR-13
Do you agree that, as an electric system must remain in balance, if there is a greater amount of energy being generated in relation to load being served that generation must be reduced or curtailed to achieve system balance (assuming that load cannot be increased)? If not, please describe how the system balance can otherwise be achieved.

HECO/HSEA-IR-14
Please explain how your proposal to require the utility to take all renewable energy generated by a FIT resource regardless of system need assures system balance and stability?

HECO/HSEA-IR-15
Is it your position that FIT resources may not be curtailed under any circumstance? If there are circumstances under which a FIT resource may be curtailed, please explain in detail how that curtailment would be accomplished. Please explain in detail how existing renewable projects fit into any curtailment order and the basis for assigning a lower curtailment priority to existing renewable resources.

HECO/HSEA-IR-16
Please provide any evaluations, studies or analyses to support the following in your FIT proposal: (1) the inclusion of each renewable resource type; (2) the viability of each renewable resource type for each island system; (3) the project size demarcations for each renewable resource type; (4) the viability of each project size for each island system; and (5) the basis for a different or separate rate for each size demarcation (if applicable). This should include any

information or evidence that you may have on the general or specific plans of any renewable resource developer to develop renewable resources of this type, and including the anticipated size of the project, on any island system within the next one, three and five years.

HECO/HSEA-IR-17
Please describe the methodology and rationale used to determine the proposed twenty (20) year terms in your FIT proposal for each technology. Please provide any evaluations, studies or analyses to support the proposed 20 years terms for each technology listed.

HECO/HSEA-IR-18
Please provide the bases for the proposed penetration limits for intermittent renewable energy sources. Please provide any evaluations, studies or analyses to support the proposed penetration limits, including in particular any evaluations, studies or analyses regarding maintenance of system reliability at the proposed penetration limits.

HECO/HSEA-IR-19
Please explain in detail how the proposed queuing procedures based upon those procedures proposed by the Midwest ISO would operate and be implemented for each island electric system. In particular, please provide any evaluations, studies or analyses of potential differences between the Midwest ISO service territory and the Hawaii utility electric systems and how those differences would be accommodated and addressed through your FIT proposal. Please discuss in detail whether the quality of power (steadiness, predictability, ability to enhance regulating resources on the grid and other such characteristic that are important to power reliability) should be a factor in setting the priority a project receives, and if not, why not.

HECO/HSEA-IR-20
Should a utility be entitled to use the generated output of a renewable resource in its service territory toward meeting a state or county mandated RPS standard regardless of ownership of the environmental credits? If not, please discuss why not?

HECO/HSEA-IR-21
Please provide any evaluations, studies, analyses or data to support the rates contained in your FIT proposal including detailed support for the applicability of those rates to the specified resources on the Hawaii utilities' island systems.

HECO/HSEA-IR-22
Please explain how your proposed rates are affected by the key costs and operating characteristics referenced in the Commission's NRRI Scoping Paper filed December 11, 2008.

HECO Companies'
Information Requests ("IRs") to Hawaii Solar Energy Association ("HSEA")

HECO/HSEA-IR-23 Ref: Issue 3
Please describe in detail your statement that a PBFit is not necessarily a superior mechanism for certain technologies including identification of the technologies and the specific reasons why a PBFit is not a superior mechanism for those technologies.

HECO/HSEA-IR-24 Ref: Issue 3
Please describe in detail all impediments to potential investors achieving a sufficient risk adjusted rate of return on solar projects in the State of Hawaii.

HECO/HSEA-IR-25
Please explain how your proposed rates are affected by the key costs and operating characteristics referenced in the Commission's NRRI Scoping Paper filed December 11, 2008.

HECO/HSEA-IR-26
Please provide any evaluations, studies, or analysis to support modifying Rule 14H, such that the penetration level at which an interconnection study is required is increased from 10% to 15%, to ensure that other customers on the distribution circuit are not adversely affected during islanding or disturbance conditions.

HECO/HSEA-IR-27
Please explain how system monitoring and control of projects connected via the FIT can be achieved, if the requirement for SCADA interface is removed? Does HSEA believe that penetrations of solar energy should be limited to the levels that can be achieved without negative impact on reliability given currently standard component on solar projects, or does it support enhancing the capabilities of solar projects in order to achieve a greater overall percentage?

HECO/HSEA-IR-28
If entities are compensated for curtailment, and given that the HSEA does not support caps, what mechanism would be enacted to avoid connecting projects which far exceed the system demand so that the system is unable to take the energy, resulting in excessive rate increases in order to compensate for non-production?

HECO/HSEA-IR-29
Given that HSEA does not support caps, what mechanism will be utilitized to ensure the necessary infrastructure and mix of generation resources to provide transfer capability, system frequency control, load following, voltage control, and system stability through faults?

Life of the Land

HECO Companies'
Information Requests ("IRs") to Life of the Land ("LOL")

HECO/LOL-IR-1
Do you agree that in addition to achieving a greater level of renewable energy for the State, reliability, power quality and ratepayer impacts are important considerations that must be addressed as a part of any feed-in tariff (FIT) design? If not, please discuss why not.

HECO/LOL-IR-2
Do you agree that the HECO, MECO and HELCO systems have different technical and reliability considerations? If not, please discuss why not.

HECO/LOL-IR-3
Do you agree that due to the existing and/or anticipated levels of intermittent renewable resources on each island system, that there may be technical and/or operational constraints upon the amount of additional intermittent renewable energy that each island system can absorb? If not, please discuss why not.

HECO/LOL-IR-4
How does your FIT proposal insure that reliability and power quality on each island electric system are maintained?

HECO/LOL-IR-5
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures reliability on each island system? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/LOL-IR-6
As variable generation is presently having an adverse impact on a system's reliability, how would your FIT proposal mitigate any further adverse impacts?

HECO/LOL-IR-7
Do you agree that your FIT proposal could result in increases in the rates paid by utility ratepayers? If so, what do you view as an acceptable level of increase for each of the utility system's ratepayers? What do you base that opinion on? Please provide any evaluations or analyses or studies used to support this opinion.

HECO/LOL-IR-8
How does your FIT proposal insure that ratepayers within each of the three utility service territories do not receive significant rate increases?

HECO/LOL-IR-9
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures that ratepayers within each of the three utility service territories

do not receive significant rate increases? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/LOL-IR-10
Do you agree that competitive bidding can provide benefits to ratepayers? If so, how does your proposal insure that ratepayers receive the benefits that competitive bidding can provide?

HECO/LOL-IR-11
Please explain why a feed in tariff should be applied to larger resources, rather than competitively bid to assure ratepayers the lowest prices for significant blocks of renewable energy?

HECO/LOL-IR-12
Do you agree that if a Renewable Energy Generating Facility is unable to meet the technical requirements set forth in the utilities' rules relating to interconnection with the utility's electric system, that Renewable Energy Generating Facility should not be interconnected with the utility's electric system? If not, please discuss why not.

HECO/LOL-IR-13
Do you agree that, as an electric system must remain in balance, if there is a greater amount of energy being generated in relation to load being served that generation must be reduced or curtailed to achieve system balance (assuming that load cannot be increased)? If not, please describe how the system balance can otherwise be achieved.

HECO/LOL-IR-14
Please explain how your proposal to require the utility to take all renewable energy generated by a FIT resource regardless of system need assures system balance and stability?

HECO/LOL-IR-15
Is it your position that FIT resources may not be curtailed under any circumstance? If there are circumstances under which a FIT resource may be curtailed, please explain in detail how that curtailment would be accomplished. Please explain in detail how existing renewable projects fit into any curtailment order and the basis for assigning a lower curtailment priority to existing renewable resources.

HECO/LOL-IR-16
Please provide any evaluations, studies or analyses to support the following in your FIT proposal: (1) the inclusion of each renewable resource type; (2) the viability of each renewable resource type for each island system; (3) the project size demarcations for each renewable resource type; (4) the viability of each project size for each island system; and (5) the basis for a different or separate rate for each size demarcation (if applicable). This should include any

information or evidence that you may have on the general or specific plans of any renewable resource developer to develop renewable resources of this type, and including the anticipated size of the project, on any island system within the next one, three and five years.

HECO/LOL-IR-17
Please provide the bases for the proposed penetration limits for intermittent renewable energy sources. Please provide any evaluations, studies or analyses to support the proposed penetration limits, including in particular any evaluations, studies or analyses regarding maintenance of system reliability at the proposed penetration limits.

HECO/LOL-IR-18
Please explain in detail how the proposed queuing procedures based upon those procedures proposed by the Midwest ISO would operate and be implemented for each island electric system. In particular, please provide any evaluations, studies or analyses of potential differences between the Midwest ISO service territory and the Hawaii utility electric systems and how those differences would be accommodated and addressed through your FIT proposal. Please discuss in detail whether the quality of power (steadiness, predictability, ability to enhance regulating resources on the grid and other such characteristic that are important to power reliability) should be a factor in setting the priority a project receives, and if not, why not.

HECO/LOL-IR-19
Should a utility be entitled to use the generated output of a renewable resource in its service territory toward meeting a state or county mandated RPS standard regardless of ownership of the environmental credits? If not, please discuss why not?

HECO/LOL-IR-20 Ref: Issue 3
Please describe in detail your statement that a PBFit is not necessarily a superior mechanism for certain technologies including identification of the technologies and the specific reasons why a PBFit is not a superior mechanism for those technolgies.

HECO/LOL-IR-21 Ref: Issue 3
Please describe in detail all impediments to potential investors achieving a sufficient risk adjusted rate of return on solar projects in the State of Hawaii.

The Solar Alliance

HECO Companies'
Information Requests ("IRs") to the Solar Alliance ("Solar Alliance")

HECO/Solar Alliance-IR-1
Do you agree that in addition to achieving a greater level of renewable energy for the State, reliability, power quality and ratepayer impacts are important considerations that must be addressed as a part of any feed-in tariff (FIT) design? If not, please discuss why not.

HECO/Solar Alliance-IR-2
Do you agree that the HECO, MECO and HELCO systems have different technical and reliability considerations? If not, please discuss why not.

HECO/Solar Alliance -IR-3
Do you agree that due to the existing and/or anticipated levels of intermittent renewable resources on each island system, that there may be technical and/or operational constraints upon the amount of additional intermittent renewable energy that each island system can absorb? If not, please discuss why not.

HECO/Solar Alliance-IR-4
How does your FIT proposal insure that reliability and power quality on each island electric system are maintained?

HECO/Solar Alliance-IR-5
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures reliability on each island system? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/Solar Alliance-IR-6
As variable generation is presently having an adverse impact on a system's reliability, how would your FIT proposal mitigate any further adverse impacts?

HECO/Solar Alliance-IR-7
Do you agree that your FIT proposal could result in increases in the rates paid by utility ratepayers? If so, what do you view as an acceptable level of increase for each of the utility system's ratepayers? What do you base that opinion on? Please provide any evaluations or analyses or studies used to support this opinion.

HECO/Solar Alliance-IR-8
How does your FIT proposal insure that ratepayers within each of the three utility service territories do not receive significant rate increases?

HECO/Solar Alliance-IR-9
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures that ratepayers within each of the three utility service territories

do not receive significant rate increases? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/Solar Alliance-IR-10
Do you agree that competitive bidding can provide benefits to ratepayers? If so, how does your proposal insure that ratepayers receive the benefits that competitive bidding can provide?

HECO/Solar Alliance-IR-11
Please explain why a feed in tariff should be applied to larger resources, rather than competitively bid to assure ratepayers the lowest prices for significant blocks of renewable energy?

HECO/Solar Alliance-IR-12
Do you agree that if a Renewable Energy Generating Facility is unable to meet the technical requirements set forth in the utilities' rules relating to interconnection with the utility's electric system, that Renewable Energy Generating Facility should not be interconnected with the utility's electric system? If not, please discuss why not.

HECO/Solar Alliance-IR-13
Do you agree that, as an electric system must remain in balance, if there is a greater amount of energy being generated in relation to load being served that generation must be reduced or curtailed to achieve system balance (assuming that load cannot be increased)? If not, please describe how the system balance can otherwise be achieved.

HECO/Solar Alliance-IR-14
Please explain how your proposal to require the utility to take all renewable energy generated by a FIT resource regardless of system need assures system balance and stability?

HECO/Solar Alliance-IR-15
Is it your position that FIT resources may not be curtailed under any circumstance? If there are circumstances under which a FIT resource may be curtailed, please explain in detail how that curtailment would be accomplished. Please explain in detail how existing renewable projects fit into any curtailment order and the basis for assigning a lower curtailment priority to existing renewable resources.

HECO/Solar Alliance-IR-16
Please provide any evaluations, studies or analyses to support the following in your FIT proposal: (1) the inclusion of each renewable resource type; (2) the viability of each renewable resource type for each island system; (3) the project size demarcations for each renewable resource type; (4) the viability of each project size for each island system; and (5) the basis for a different or separate rate for each size demarcation (if applicable). This should include any

information or evidence that you may have on the general or specific plans of any renewable resource developer to develop renewable resources of this type, and including the anticipated size of the project, on any island system within the next one, three and five years.

HECO/Solar Alliance-IR-17
Please describe the methodology and rationale used to determine the proposed twenty (20) year terms in your FIT proposal for each technology. Please provide any evaluations, studies or analyses to support the proposed 20 years terms for each technology listed.

HECO/Solar Alliance-IR-18
Please provide the bases for the proposed penetration limits for intermittent renewable energy sources. Please provide any evaluations, studies or analyses to support the proposed penetration limits, including in particular any evaluations, studies or analyses regarding maintenance of system reliability at the proposed penetration limits.

HECO/Solar Alliance-IR-19
Please explain in detail how the proposed queuing procedures based upon those procedures proposed by the Midwest ISO would operate and be implemented for each island electric system. In particular, please provide any evaluations, studies or analyses of potential differences between the Midwest ISO service territory and the Hawaii utility electric systems and how those differences would be accommodated and addressed through your FIT proposal. Please discuss in detail whether the quality of power (steadiness, predictability, ability to enhance regulating resources on the grid and other such characteristic that are important to power reliability) should be a factor in setting the priority a project receives, and if not, why not.

HECO/Solar Alliance-IR-20
Should a utility be entitled to use the generated output of a renewable resource in its service territory toward meeting a state or county mandated RPS standard regardless of ownership of the environmental credits? If not, please discuss why not?

HECO/Solar Alliance-IR-21
Please provide any evaluations, studies, analyses or data to support the rates contained in your FIT proposal including detailed support for the applicability of those rates to the specified resources on the Hawaii utilities' island systems.

HECO/Solar Alliance-IR-22
Please explain how your proposed rates are affected by the key costs and operating characteristics referenced in the Commission's NRRI Scoping Paper filed December 11, 2008.

Sopogy Inc.

HECO Companies'
Information Requests ("IRs") to Sopogy Inc. ("Sopogy")

HECO/Sopogy-IR-1
Do you agree that in addition to achieving a greater level of renewable energy for the State, reliability, power quality and ratepayer impacts are important considerations that must be addressed as a part of any feed-in tariff (FIT) design? If not, please discuss why not.

HECO/Sopogy-IR-2
Do you agree that the HECO, MECO and HELCO systems have different technical and reliability considerations? If not, please discuss why not.

HECO/Sopogy -IR-3
Do you agree that due to the existing and/or anticipated levels of intermittent renewable resources on each island system, that there may be technical and/or operational constraints upon the amount of additional intermittent renewable energy that each island system can absorb? If not, please discuss why not.

HECO/Sopogy-IR-4
How does your FIT proposal insure that reliability and power quality on each island electric system are maintained?

HECO/Sopogy-IR-5
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures reliability on each island system? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/Sopogy-IR-6
As variable generation is presently having an adverse impact on a system's reliability, how would your FIT proposal mitigate any further adverse impacts?

HECO/Sopogy-IR-7
Do you agree that your FIT proposal could result in increases in the rates paid by utility ratepayers? If so, what do you view as an acceptable level of increase for each of the utility system's ratepayers? What do you base that opinion on? Please provide any evaluations or analyses or studies used to support this opinion.

HECO/Sopogy-IR-8
How does your FIT proposal insure that ratepayers within each of the three utility service territories do not receive significant rate increases?

HECO/Sopogy-IR-9
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures that ratepayers within each of the three utility service territories

do not receive significant rate increases? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/Sopogy-IR-10
Do you agree that competitive bidding can provide benefits to ratepayers? If so, how does your proposal insure that ratepayers receive the benefits that competitive bidding can provide?

HECO/Sopogy-IR-11
Please explain why a feed in tariff should be applied to larger resources, rather than competitively bid to assure ratepayers the lowest prices for significant blocks of renewable energy?

HECO/Sopogy-IR-12
Do you agree that if a Renewable Energy Generating Facility is unable to meet the technical requirements set forth in the utilities' rules relating to interconnection with the utility's electric system, that Renewable Energy Generating Facility should not be interconnected with the utility's electric system? If not, please discuss why not.

HECO/Sopogy-IR-13
Do you agree that, as an electric system must remain in balance, if there is a greater amount of energy being generated in relation to load being served that generation must be reduced or curtailed to achieve system balance (assuming that load cannot be increased)? If not, please describe how the system balance can otherwise be achieved.

HECO/Sopogy-IR-14
Please explain how your proposal to require the utility to take all renewable energy generated by a FIT resource regardless of system need assures system balance and stability?

HECO/Sopogy-IR-15
Is it your position that FIT resources may not be curtailed under any circumstance? If there are circumstances under which a FIT resource may be curtailed, please explain in detail how that curtailment would be accomplished. Please explain in detail how existing renewable projects fit into any curtailment order and the basis for assigning a lower curtailment priority to existing renewable resources.

HECO/Sopogy-IR-16
Please provide any evaluations, studies or analyses to support the following in your FIT proposal: (1) the inclusion of each renewable resource type; (2) the viability of each renewable resource type for each island system; (3) the project size demarcations for each renewable resource type; (4) the viability of each project size for each island system; and (5) the basis for a different or separate rate for each size demarcation (if applicable). This should include any

information or evidence that you may have on the general or specific plans of any renewable resource developer to develop renewable resources of this type, and including the anticipated size of the project, on any island system within the next one, three and five years.

HECO/Sopogy-IR-17
Please describe the methodology and rationale used to determine the proposed twenty (20) year terms in your FIT proposal for each technology. Please provide any evaluations, studies or analyses to support the proposed 20 years terms for each technology listed.

HECO/Sopogy-IR-18
Please provide the bases for the proposed penetration limits for intermittent renewable energy sources. Please provide any evaluations, studies or analyses to support the proposed penetration limits, including in particular any evaluations, studies or analyses regarding maintenance of system reliability at the proposed penetration limits.

HECO/Sopogy-IR-19
Please explain in detail how the proposed queuing procedures based upon those procedures proposed by the Midwest ISO would operate and be implemented for each island electric system. In particular, please provide any evaluations, studies or analyses of potential differences between the Midwest ISO service territory and the Hawaii utility electric systems and how those differences would be accommodated and addressed through your FIT proposal. Please discuss in detail whether the quality of power (steadiness, predictability, ability to enhance regulating resources on the grid and other such characteristic that are important to power reliability) should be a factor in setting the priority a project receives, and if not, why not.

HECO/Sopogy-IR-20
Should a utility be entitled to use the generated output of a renewable resource in its service territory toward meeting a state or county mandated RPS standard regardless of ownership of the environmental credits? If not, please discuss why not?

HECO/Sopogy-IR-21
Please provide any evaluations, studies, analyses or data to support the rates contained in your FIT proposal including detailed support for the applicability of those rates to the specified resources on the Hawaii utilities' island systems.

HECO/Sopogy-IR-22
Please explain how your proposed rates are affected by the key costs and operating characteristics referenced in the Commission's NRRI Scoping Paper filed December 11, 2008.

HECO Companies'
Information Requests ("IRs") to Sopogy Inc. ("Sopogy")

HECO/Sopogy-IR-23 Ref: Paragraph 4

Please provide any evaluations, studies, analyses or data to support your request that the rates for solar technologies – both PV and CSP – be equivalent for each island and across the relevant project size ranges

Zero Emissions Leasing LLC

HECO Companies'
Information Requests ("IRs") to Zero Emissions Leasing LLC ("ZEL")

HECO/ZEL-IR-1
Do you agree that in addition to achieving a greater level of renewable energy for the State, reliability, power quality and ratepayer impacts are important considerations that must be addressed as a part of any feed-in tariff (FIT) design? If not, please discuss why not.

HECO/ZEL-IR-2
Do you agree that the HECO, MECO and HELCO systems have different technical and reliability considerations? If not, please discuss why not.

HECO/ZEL -IR-3
Do you agree that due to the existing and/or anticipated levels of intermittent renewable resources on each island system, that there may be technical and/or operational constraints upon the amount of additional intermittent renewable energy that each island system can absorb? If not, please discuss why not.

HECO/ZEL-IR-4
How does your FIT proposal insure that reliability and power quality on each island electric system are maintained?

HECO/ZEL-IR-5
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures reliability on each island system? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/ZEL-IR-6
As variable generation is presently having an adverse impact on a system's reliability, how would your FIT proposal mitigate any further adverse impacts?

HECO/ZEL-IR-7
Do you agree that your FIT proposal could result in increases in the rates paid by utility ratepayers? If so, what do you view as an acceptable level of increase for each of the utility system's ratepayers? What do you base that opinion on? Please provide any evaluations or analyses or studies used to support this opinion.

HECO/ZEL-IR-8
How does your FIT proposal insure that ratepayers within each of the three utility service territories do not receive significant rate increases?

HECO/ZEL-IR-9
What specific data, evaluations, studies or analyses did you rely upon as a part of any conclusion that your FIT proposal insures that ratepayers within each of the three utility service territories

do not receive significant rate increases? Please provide that data, evaluations, studies and/or analyses to the extent they are available.

HECO/ZEL-IR-10
Do you agree that competitive bidding can provide benefits to ratepayers? If so, how does your proposal insure that ratepayers receive the benefits that competitive bidding can provide?

HECO/ZEL-IR-11
Please explain why a feed in tariff should be applied to larger resources, rather than competitively bid to assure ratepayers the lowest prices for significant blocks of renewable energy?

HECO/ZEL-IR-12
Do you agree that if a Renewable Energy Generating Facility is unable to meet the technical requirements set forth in the utilities' rules relating to interconnection with the utility's electric system, that Renewable Energy Generating Facility should not be interconnected with the utility's electric system? If not, please discuss why not.

HECO/ZEL-IR-13
Do you agree that, as an electric system must remain in balance, if there is a greater amount of energy being generated in relation to load being served that generation must be reduced or curtailed to achieve system balance (assuming that load cannot be increased)? If not, please describe how the system balance can otherwise be achieved.

HECO/ZEL-IR-14
Please explain how your proposal to require the utility to take all renewable energy generated by a FIT resource regardless of system need assures system balance and stability?

HECO/ZEL-IR-15
Is it your position that FIT resources may not be curtailed under any circumstance? If there are circumstances under which a FIT resource may be curtailed, please explain in detail how that curtailment would be accomplished. Please explain in detail how existing renewable projects fit into any curtailment order and the basis for assigning a lower curtailment priority to existing renewable resources.

HECO/ZEL-IR-16
Please provide any evaluations, studies or analyses to support the following in your FIT proposal: (1) the inclusion of each renewable resource type; (2) the viability of each renewable resource type for each island system; (3) the project size demarcations for each renewable resource type; (4) the viability of each project size for each island system; and (5) the basis for a different or separate rate for each size demarcation (if applicable). This should include any

information or evidence that you may have on the general or specific plans of any renewable resource developer to develop renewable resources of this type, and including the anticipated size of the project, on any island system within the next one, three and five years.

HECO/ZEL-IR-17
Please describe the methodology and rationale used to determine the proposed twenty (20) year terms in your FIT proposal for each technology. Please provide any evaluations, studies or analyses to support the proposed 20 years terms for each technology listed.

HECO/ZEL-IR-18
Please provide the bases for the proposed penetration limits for intermittent renewable energy sources. Please provide any evaluations, studies or analyses to support the proposed penetration limits, including in particular any evaluations, studies or analyses regarding maintenance of system reliability at the proposed penetration limits.

HECO/ZEL-IR-19
Please explain in detail how the proposed queuing procedures based upon those procedures proposed by the Midwest ISO would operate and be implemented for each island electric system. In particular, please provide any evaluations, studies or analyses of potential differences between the Midwest ISO service territory and the Hawaii utility electric systems and how those differences would be accommodated and addressed through your FIT proposal. Please discuss in detail whether the quality of power (steadiness, predictability, ability to enhance regulating resources on the grid and other such characteristic that are important to power reliability) should be a factor in setting the priority a project receives, and if not, why not.

HECO/ZEL-IR-20
Should a utility be entitled to use the generated output of a renewable resource in its service territory toward meeting a state or county mandated RPS standard regardless of ownership of the environmental credits? If not, please discuss why not?

HECO/ZEL-IR-21
Please provide any evaluations, studies, analyses or data to support the rates contained in your FIT proposal including detailed support for the applicability of those rates to the specified resources on the Hawaii utilities' island systems.

HECO/ZEL-IR-22
Please explain how your proposed rates are affected by the key costs and operating characteristics referenced in the Commission's NRRI Scoping Paper filed December 11, 2008.

HECO Companies'
Information Requests ("IRs") to Zero Emissions Leasing LLC ("ZEL")

HECO/ZEL-IR-23 Ref: Issue 1

Please provide any evaluations, studies, analyses or data to support your assertion that PBFits "unlimited by annual caps, production caps (curtailment), size caps and expenditure caps" are also consistent with "minimum cost to the public."

HECO/ZEL-IR-24 Ref: Issue 2

Please provide any evaluations, studies, analyses or data to support your assertion that a benefit of PBFits are "the achievement of energy security and independence" "at minimal additional cost to utilities, ratepayers, and the State of Hawaii."

HECO/ZEL-IR-25

Please explain how FIT will encourage diversity of renewable energy resources in the absence of caps.